

US Topo Users Guide – Quickstart

This Quickstart guide provides an overview of access to and use of US Topo and “Digital Maps - Beta” for the beginning user. Additional information about these products is available at <http://nationalmap.gov/ustopo/about.html>. More details about The National Map are at <http://nationalmap.gov/>.

Note: US Topo maps are an evolution of the initial “Digital Maps – Beta” product. US Topos include all of the content of the “Digital Map – Beta” plus integrated contours and hydrographic features.

US Topos are the next generation of U.S. Geological Survey (USGS) topographic maps. They are built from data layers of The National Map, which is a synthesis of information from local, State, and Federal partners. US Topos and “Digital Maps - Beta” are available on the Web at no cost, in a GeoPDF® format. Free tools allow users to interact with the files. Users can determine coordinates of any point on the map, measure distances and angles between points, measure areas, track positions using a GPS device, display coordinates in various map projections and datums, turn layers on and off, zoom in and out, and print the map image.

Prerequisites

These instructions are written for the Windows operating system on a personal computer. Windows® XP, Windows Server™ 2003, or Windows Vista™ are required. Broadband Internet access is recommended.

Adobe® Reader® software is required and may be downloaded free at <http://get.adobe.com/reader/>. Adobe Acrobat® software may be used in lieu of Adobe Reader, if available. The latest three versions of either Adobe Reader or Adobe Acrobat are acceptable.

To install the GeoPDF tools to get full functionality, download TerraGo Toolbar (formerly known as GeoPDF Toolbar) at <http://www.terragotech.com/download/download?p=geopdftoolbar>. The download and use of the TerraGo Toolbar are free. (Note: Adobe Reader or Acrobat must be installed before TerraGo Toolbar is installed.)

Access to US Topos

All US Topos and “Digital Maps - Beta” are available through the USGS Store. Click on the following for a direct link to the “[Map Locator](#)” Download US Topos or select the “Download Maps” tab on the US Topo web site.

Locating US Topos and “Digital Maps – Beta” through the USGS Store

At the “Map Locator” page of the USGS Store, select the orange ‘Show US Topo and “Digital Maps - Beta”’ button below the map graphic. When selected, a layer showing the available US Topos will appear as red dots. The older “Digital Maps – Beta” will appear as yellow dots. By zooming in on the dots, they become quadrangle outlines filled with red or yellow hatching. Use the “MARK POINTS” option to select the desired quadrangle. Click on the red marker that marks the selected quadrangle to display a list of available maps for that quadrangle.

USGS quadrangles can be searched for by quadrangle name or by address/place. Note: National coverage of US Topos will require some time to complete.

A map showing 2009 coverage and planned 2010 coverage is at <http://nationalmap.gov/ustopo/about.html>.

An index of the States currently available in the US Topo and/or “Digital Map – Beta” products and amount of coverage or quadrangles loaded for each State will be published when available.

Downloading US Topos and "Digital Maps – Beta"

Click “download” for the selected map, then click “Save” to save the downloaded file to a directory and file name you specify on your local hard drive. The maps is delivered in compressed zip files (.zip). To access the map file contained therein, unzip and extract the file. Please note: the possibility of file corruption exists if the file is not extracted properly from the zip file.

To unzip and extract the map file from a compressed zip file:

1. Locate the compressed zip file that you want to extract files or folders from.
2. Do one of the following:
 - To extract a single file or folder, double-click the compressed zip file to open it. Then, drag the file or folder from the compressed zip file to a new location.
 - To extract the entire contents of the compressed zip file, right-click the compressed zip file, click Extract All, and then follow the instructions.

You also can use your favorite third-party compression utility to unzip and extract files. Please follow their instructions on how to properly unzip and extract files.

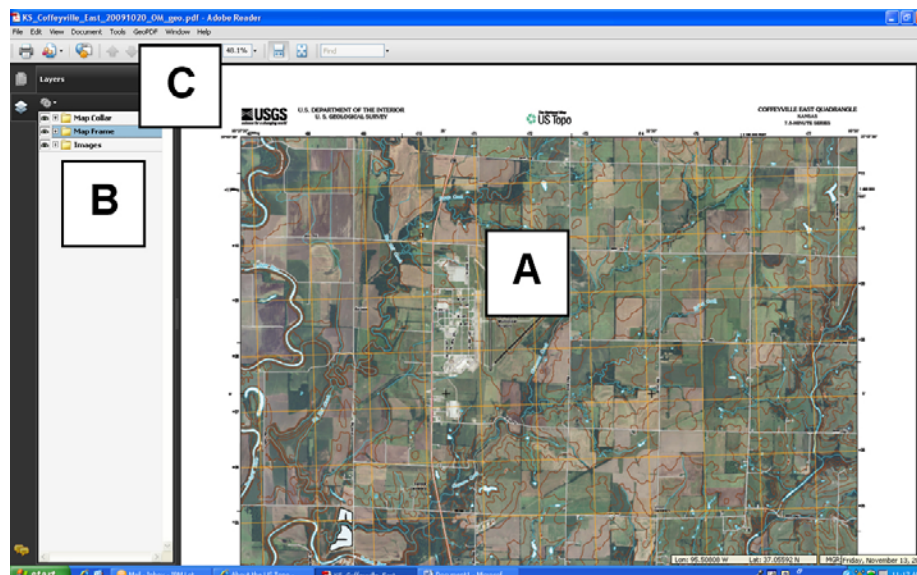
More information about using compressed zip files in the Windows environment can be found in your Windows help or go to <http://windowshelp.microsoft.com/Windows/en-US/Help/7050d809-c761-43d4-aae7-587550cd341a1033.mspx#EEB>. Additional information about the Zip (file format) is available at http://en.wikipedia.org/wiki/Zip_file.

Opening the Extracted Map File

Find the extracted file on your hard drive. Double click on the file icon or name to open the file. The map will open in an Adobe Reader (or Adobe Acrobat, if installed) window.

If the TerraGo Toolbar hasn’t already been installed, the opportunity to download and install will be offered at this time. This download is free and installation is required only once. These tools supplement Adobe Reader capabilities by providing added capabilities to use the US Topo or “Digital Map – Beta.” More information is available at <http://www.terragotech.com/solutions/index/> under “TerraGo Toolbar.”

After the file has been opened and the TerraGo Technologies tools have been installed, the Adobe Reader screen should look like this:



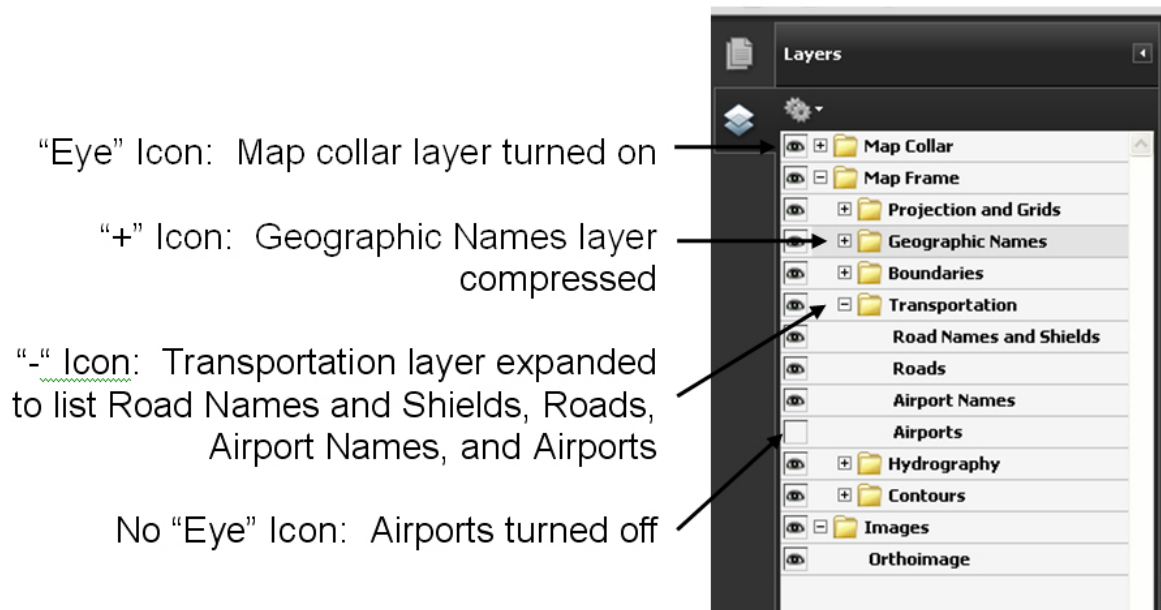
Using the Map

The screen has three sections:

- A. Map image,
- B. Listing of map layers, and
- C. Adobe Reader and TerraGo Toolbar menus and tools.

Layers

- Left click on the “eye” icon to turn a layer off in the map image.
- Left click on the box where the “eye” icon was to turn the layer back on.
- Left click on the “+” icon to expand the list of layers. Note that you can turn these subordinate layers on or off by clicking on the “eye” icon/box, as above.
- Left click on the “-“ icon to collapse the list of layers.



It may take a few seconds for the map image to refresh when the layer selection is changed.

To turn on tools, left click on “View” then on “Toolbars” and then on “More Tools.” Check the box next to “Select and Zoom Toolbar” and then check the boxes next to the tools you want to turn on in the toolbar (such as “Marquee Zoom” and “Hand Tool”). Clicking the right mouse button within the map image also will open a window within which some tools can be selected.

Zoom In and Out

The options for zooming are as follows.

- Click on the “+” and “-“ icons in the Adobe toolbar (Section C).
- Enter a percent in the window to the right of the “+” icon in the Adobe toolbar and press “Enter”.
- From the “Tools” pull-down menu at the top of the screen, choose “Select & Zoom”. Select “Marquee Zoom” from the flyout menu. Place the cursor over the area of interest on the map and hold down the left mouse button to create a zoom rectangle over the desired area.
- If the “Marquee Zoom” tool has been turned on as described above, select that tool from the menu bar.

The map image can be reset to show the entire quadrangle by clicking on the arrow to the right of the percent box on the Adobe toolbar and selecting “Fit Page”.

Pan

To move around the map image, click on “Select & Zoom” from the “Tools” pull-down menu at the top of the screen. Choose “Hand Tool” and reposition the cursor over the map and left click the mouse. Hold down the left mouse button and move the cursor around the map to reposition the image. (Note: you can not pan if the map display shows the entire map image. If you have already turned on the “Hand Tool” as described above, select that tool from the menu bar.)

GeoPDF Tools



GeoTool – Locks/unlocks coordinates, Google™ Map It, and launches other GeoPDF tools.



GeoLocator – Shows and finds coordinates and provides the ability to modify coordinate system displays.



GeoMeasure – Measures either length or area.



GeoTrack – Displays the current position of an attached GPS device.



GeoInfo – Imports, exports, and deletes data. GeoInfo currently (2009) is not available for use in Adobe Reader because the US Topo and “Digital Maps – Beta” GeoPDF files do not yet support this tool.

Complete information on using the GeoPDF tools is explained in depth in the TerraGo Toolbar help. If you need further assistance in using TerraGo Toolbar, access the Knowledgebase or Tutorial sections found in the navigation panel on the left side of the TerraGo Technologies Support web page at <http://www.terragatech.com/support/index/>.

Printing

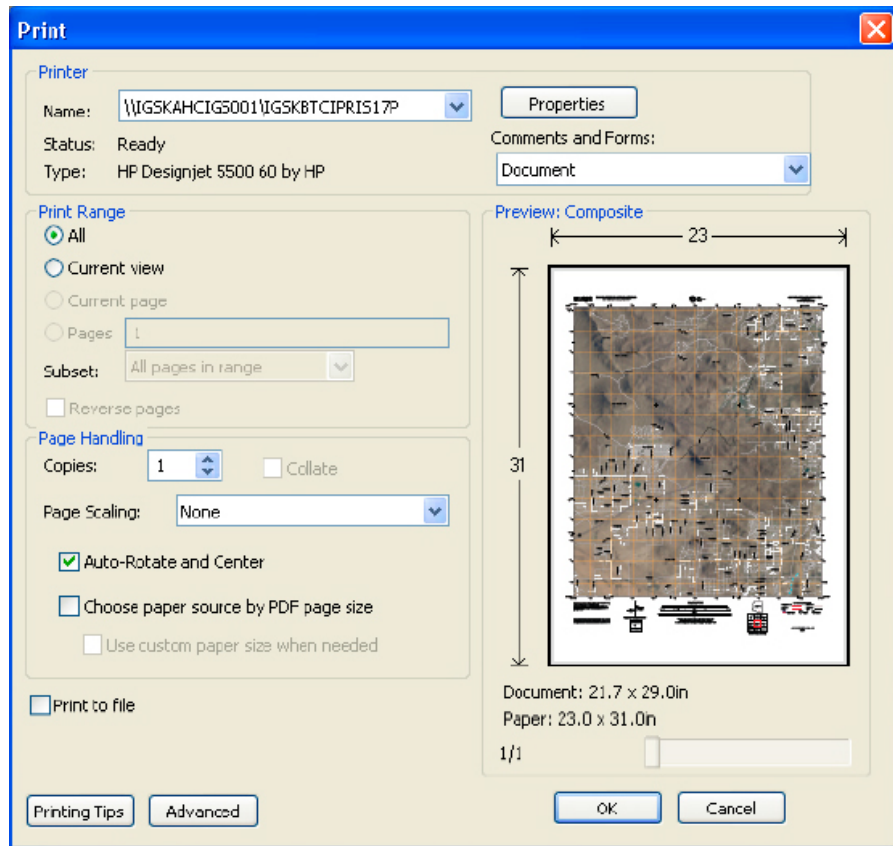
This process uses the Adobe Reader Print dialog box. Select “File” from the Menu bar and then select “Print” or you can type “Ctrl+P” on your keyboard or you can click on the “Printer” icon on the toolbar to open the Print dialog box.

Printing - Option 1

To print the entire map at 1:24,000-scale, open the Print dialog box.

1. In the “Printer” section of the Print dialog box
 - a. Select the printer to be used from the Printer Name drop down list. To print the entire map at 1:24,000-scale a large format graphics printer/plotter is required.
 - b. Select the “Properties” button to access the properties panel for the selected printer/plotter. Define the paper page size. Make sure the printer/plotter paper page size is large enough to accommodate both the map page size and the nonprinting margins for the selected printer/plotter combined. Also at this time the other settings can be defined. Select “OK” to return to the Adobe Reader Print dialog box.
 - c. Using the drop down list in the “Comments and Forms” dialog, set it to “Document.”
2. In the “Print Range” section of the Print dialog box select the “All” radio button.
3. In the “Page Handling” section of the Print dialog box, make the following selections. a. Set the number of copies needed using the “Copies” dialog. b. Set the “Page Scaling” drop down list to “None.” c. Check the box next to “Auto-Rotate and Center.”

After following all of the steps above, the Adobe Reader Print dialog box should look like the following:



Note the “Preview: Composite” section, shows the entire map fits within the paper size defined in step 1b above.

4. Click on the “OK” button to send the “Digital Map – Beta” map to the selected printer/plotter.

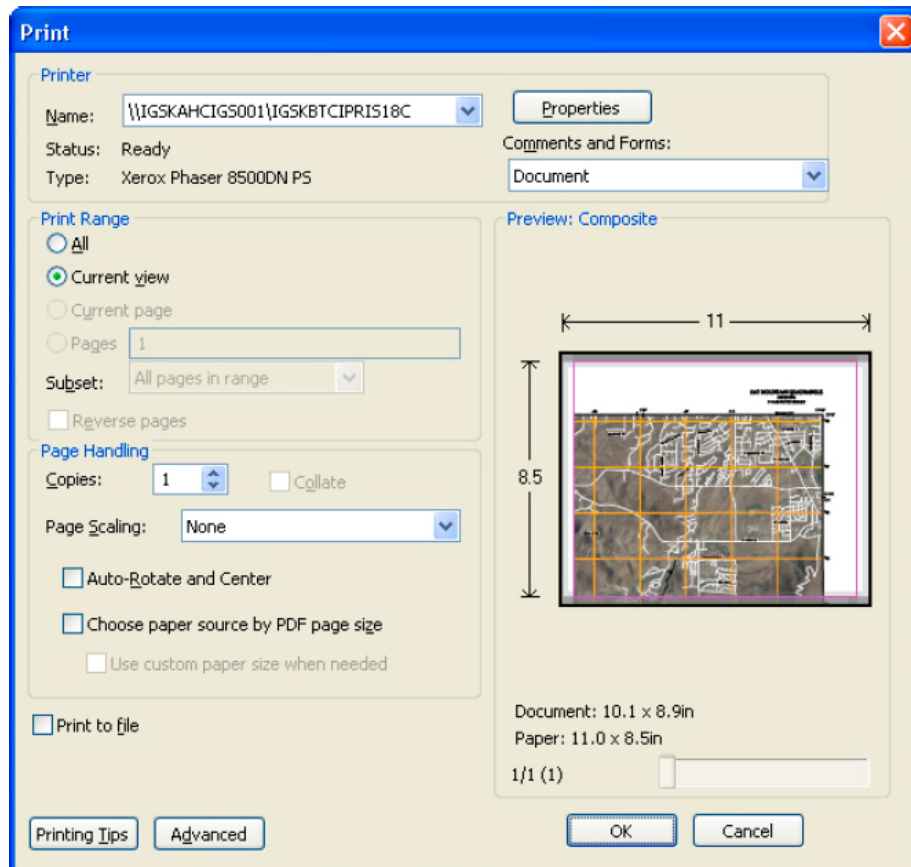
Printing – Option 2

If you don’t have a large format graphics printer/plotter to accommodate the entire map page size or if you simply want to print part of the map at 1:24,000-scale on a smaller piece of paper, position the map in the Adobe Reader window (Note: to print the exact desired part you may have to adjust the size of your Adobe Reader window or adjust the position of the map within the Adobe Reader window), set magnification to 100 percent (Note: The magnification higher can be set higher, but that actually lessens the overall area to be printed. Open the Print dialog box.

1. In the “Printer” section of the Print dialog box:
 - a. Select the printer to be used from the “Printer Name” drop down list.
 - b. Select the “Properties” button to access the properties panel for the selected printer. Define the paper page size and desired page orientation. Also at this time the other printer settings can be defined. Select “OK” to return to the Adobe Reader Print dialog box.
 - c. Using the drop down list in the “Comments and Forms” dialog, set it to “Document.”
2. In the “Print Range” section of the “Print” dialog box select the “Current view” radio button.
3. In the “Page Handling” section of the “Print” dialog box, make the following selections. a. Set the number of copies needed using the “Copies” dialog. b. Set the “Page Scaling” drop down list to “None.”
4. Check the “Preview: Composite” section to see if the desired area to be printed is what you want.

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The size of the Adobe Reader window, position of the map within the Adobe Reader window, or both may need to be adjusted to get the desired area you want for printing. Also, if you are zoomed in further than 100 percent you may have to zoom out to get the desired area for printing. After following all of the steps above, the Adobe Reader Print dialog box should look like the following:



Note that the “Preview: Composite” section shows the desired part of the “Digital Map – Beta” that will print on a landscape 8.5 x 11 inch paper size as defined in step 1b.

5. Click on the “OK” button to send the map to the selected printer.

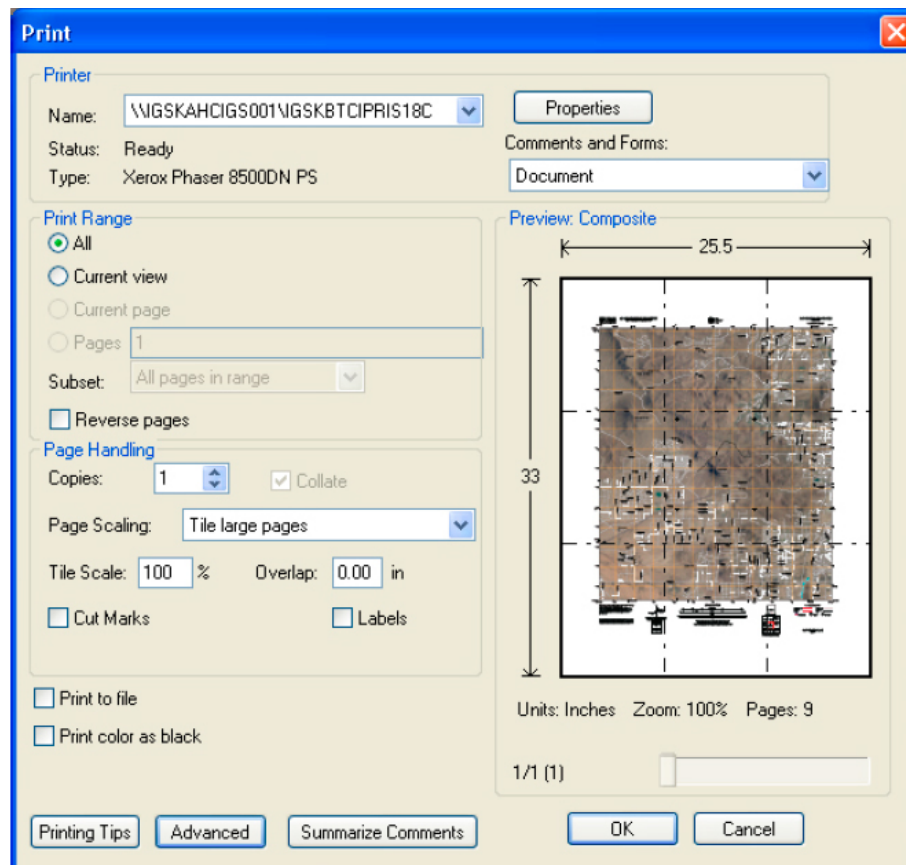
Printing – Option 3

If Adobe Acrobat is the program being used (not the free Adobe Reader) the capability to print the entire map on smaller pieces of paper is available. Open the Print dialog box, then:

1. In the “Printer” section of the Print dialog box
 - a. Select the printer to be used from the “Printer Name” drop down list.
 - b. Select the “Properties” button to access the properties panel for the selected printer. Define the paper page size and desired page orientation. Also at this time the other printer settings can be defined. Select “OK” to return to the Adobe Reader Print dialog box.
 - c. Using the drop down list in the “Comments and Forms:” dialog, set it to “Document.”
2. In the “Print Range” section of the “Print” dialog box select the “All” radio button.
3. In the “Page Handling” section of the “Print” dialog box, make the following selections.
 - a. Set the number of copies needed using the “Copies” dialog.
 - b. Set the “Page Scaling” drop down list to “Tile large pages.”
 - c. Set the “Tile Scale:” to 100 percent

- d. Set desired “Overlap:”. (Overlap specifies the minimum amount of duplicated information printed on each tile for ease in assembly. The “Overlap” option uses the unit of measure specified for the document. The value should be greater than the minimum nonprinting margins for the printer. You can specify up to one-half the size of the shortest side of the document page to overlap. For example, tiles for a page that measure 11-by-17 inches (279.4mm-by-431.8mm) can overlap up to 5.5 inches (139.7mm).
- e. Check “Labels” if desired. (Checking “Labels” prints the PDF name, date of printing, and tile coordinate on every sheet. For example, Page 1 (1,1) means row 1, column 1 of the first page. Tile coordinates are used for reassembling the tiles.
- f. Check “Cut Marks” if desired. (Checking “Cut Marks” prints marks on each corner of a tiled page for ease of assembly. Use this option in conjunction with the Overlap option. When an overlapping edge is specified and the edges are superimposed, you can use the cut marks to line up the tiles.

After following all of the steps above, the Adobe Acrobat Print dialog box should look like the following:



Note that the “Preview: Composite” section shows the tiles of the “Digital Map – Beta” that are to print on a Portrait 8.5 x 11 inch paper size as defined in step 1b.

4. Click on the “OK” button to send the “Digital Map – Beta” map to the selected printer.

For information on additional printing options or other use issues for Adobe Reader or Adobe Acrobat, access the “Help” pages from “Help” on the Menu bar or press the F1 key. Also, you can visit the appropriate Adobe Product Support Center at <http://www.adobe.com/support/>.

Thanks

We hope you find the downloading, searching, modification, and printing instructions for these maps is a simple and rewarding process. The US Topo is a continuously evolving product and the USGS will add additional data layers and functionality when available. We value your feedback and invite you to send your suggestions to http://nationalmap.gov/ustopo/ustopo_feedback.html or simply click the “Contact Us” tab on the US Topo home page.

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Last updated February 10, 2010.